

PRECAST CONCRETE STONE WITH ANGLED  
SIDE WALL SECTION

TECHNICAL FIELD

[0001] The present invention relates to a precast concrete stone having a base section with straight side walls, one of which is an angled side wall. The precast concrete stone can be used as a paver or a retaining wall precast concrete block.

BACKGROUND ART

[0002] Precast concrete stones are well known in the art and these are fabricated of various shapes, usually rectangular in contour or having a zig-zag shape side wall whereby to interlock with adjacent like stones. It is also known to have stones of different sizes laid side-by-side and also at right angles to one another to form a decorative pavement. It is also known to use precast concrete blocks with integrated locking formations whereby to construct retaining walls. These blocks are also of substantially rectangular contour and may be disposed relative to one another at right angles to construct walls having irregularly disposed blocks to resemble real stone. These precast concrete stones are also roughened or tumbled to further resemble a real stone.

SUMMARY OF INVENTION

[0003] A feature of the present invention is to provide a precast concrete stone or block formed of a base section of predetermined thickness and an integrally formed stone section projecting from an outer face of the base section and wherein the base section has side wall sections one of which is an angled side wall section whereby to form stone pavements or block retaining walls having irregular and angulated intersecting joints.

[0004] Another feature of the present invention is to provide a precast concrete stone having a base section and a stone section formed integral therewith with the stone

section recessed from the straight contour side walls of the base section to form a contour joint portion with at least one of the side wall sections being an angulated section and when laid on a ground surface as pavement, it resembles flagstones of irregular shapes with intersecting angulated and straight joints.

[0005] According to the above features, from a broad aspect, the present invention provides a precast concrete stone with an angled side wall section and has a base section of predetermined thickness and straight side wall sections, one of which is an angled side wall section. A stone section is formed integral with the base section and projects from an outer surface of the base section. The stone section is recessed from at least two adjacent ones of the straight side wall sections and exposes a top flat edge surface of the outer surface of the base section about at least two adjacent flat edge surfaces of the stone section. The side wall section is adapted to mate with an angled side wall section of another precast concrete stone whereby stones can be disposed side-by-side and offset from one another to obstruct at least some continuous joints between a plurality of adjacent stones.

#### BRIEF DESCRIPTION OF DRAWINGS

[0006] A preferred embodiment of the present invention will now be described with reference to the accompanying drawings in which:

[0007] FIG. 1 is a perspective view showing the construction of the precast concrete stone of the present invention;

[0008] FIG. 2 is a top view of Figure 1;

[0009] FIG. 3 is an end view of Figure 1;

[00010] FIG. 4 is a top view of a precast concrete stone with straight parallel opposed side walls;

[00011] FIG. 5 is a fragmented section view showing two stones positioned side-by-side and forming a joint adjacent

their stone sections and supported elevated from their base sections;

[00012] FIG. 6 is a top view showing a pavement using precast concrete stones fabricated in accordance with the present invention;

[00013] FIG. 7 is a top view showing an alternate configuration of the precast concrete stone of the present invention;

[00014] FIG. 8 is a side view of Figure 7;

[00015] FIG. 9 is a cross-section view showing two stones of Figure 7 supported in side-by-side relationship;

[00016] FIG. 10 is a top view showing a pavement section and wherein the precast concrete stone of the present invention is provided with two angled side wall sections; and

[00017] FIG. 11 is a perspective view of such stones configured for use as wall retaining blocks.

#### DESCRIPTION OF PREFERRED EMBODIMENTS

[00018] Referring now to the drawings, and more particularly to Figure 1, there is shown generally at 10 the precast concrete stone of the present invention. It is comprised of a base section 11 of predetermined thickness and having straight side wall sections 12, with one of the side wall sections 12' being an angled side wall section.

[00019] A stone section 13 is formed integral with the base section 11 and projects from an outer surface 14 of the base section 11. The stone section 13 is also recessed from the side walls 12 whereby to expose a top flat edge contour surface 15 all about the stone section 13. The stone section also has side walls 16 and one of which, namely side wall 16', is also angulated.

[00020] As better seen from Figure 2, the side walls 16 of the stone section 13 have an irregular edge simulating a real stone. The top surface 17 is also casted to have an irregular surface or the surface of the stone after casted

is roughened by roughing devices such as by impact of rotating chains.

[00021] As shown in Figure 4, other precast concrete stones are casted as rectangular or square stones 10' having opposed parallel side walls 22 and end walls 23. The stones section 13' is spaced from the side wall exposing a top flat contour surface 15'. The side walls 12 and 22 of the stone are flat straight side walls whereby when the stones are laid side-by-side, as shown in Figure 5, the side walls 12 are in flat contact with one another and the contour flat surfaces 15 form a recess channel or joint 20 in which a joint filler material, such as sand 19 may be placed whereby to form a pavement, such as the pavement illustrated at 30 in Figure 6, exposing only the stone sections 13 having irregular contour edges 16 and 16'.

[00022] As shown in Figure 6, the pavement 30 includes precast concrete stones 10 as well as precast concrete stones 10' which are laid side-by-side whereby to form angled joints 31 as well as straight joints 32. However, the object of providing a precast concrete stone having at least one angulated side wall is to provide a pavement wherein straight joints do not have continuity. That is to say, straight joints 32 are often intercepted by the stones 10 to break the continuity of these joints. In the pavement pattern as illustrated in Figure 6, one of the straight joints, namely joint 33, is a continuous joint simply to illustrate what is meant by continuity. The angle side wall sections 12' redirect a straight joint at an angle, such as illustrated at 34 wherein straight joint 32 is terminated and redirected at an angle. These stones 10 and 10' can be laid either horizontally or vertically but when forming a pattern the joints are disposed at irregular angles as well as straight angles. Therefore, the pavement provides the resemblance of a flagstone-like pavement with some of the stones having angulated sections resembling fragmented corners of flagstones. Because these stones 10 can be laid

either vertically or horizontally, it can create non-repetitive patterns throughout very large surfaces. Still further, the stones 10' are dimensioned to be interposed in side-by-side relationship with the stones 10 to form workable patterns such as that illustrated in Figure 6.

[00023] With reference now to Figure 10, there is shown a precast concrete stone 10" constructed in accordance with the present invention and which comprises two straight angulated side wall sections 12". One of these straight angulated side wall sections could also be disposed in opposed corners of the stone 10" such as indicated by phantom line 36. Alternatively, the angle wall section may be recessed as shown by phantom line 37. Accordingly, it is not intended to restrict the present invention to an angulated side wall section as specifically illustrated in the embodiment illustrated by Figures 1 to 3.

[00024] Referring now to Figures 7 to 9, there is shown another embodiment of the construction of the precast concrete stone 10" and wherein the stone section 13" is positioned in line or flush with two adjacent side walls 12" and spaced from the other side walls whereby to expose a top flat surface 15" which constitutes the complete joint when two stones are laid side-by-side. Again, the stone section 13" has an irregular contour. However, it is preferable to fabricate such stones with the embodiment of Figures 1 to 3 in order to have joints of more regular width about the stones when laid in a pattern such as illustrated in Figure 6. It is also pointed out that the stone sections 13 which have irregular shaped contour side walls 16 also have their corners rounded as illustrated by reference numeral 16" to again resemble more closely a real stone.

[00025] Referring now to Figure 11, there is shown a still further modification of the present invention wherein the concrete stone is used as a retaining wall concrete block. The stone is constructed similar to that illustrated in Figures 1 to 5 with the exception that the side walls 12

and 12' are much thicker and the stones are laid on their sides. As hereinshown the side wall sections 12" are extended to form a block. Also, the blocks may be grooved such as illustrated at 50 on opposed side walls 12" whereby to receive an interconnecting insert 51 to prevent forward shifting of the blocks. Such block interconnection is well known in the art and forms part of one of our patents. As hereinshown the angle side wall or angled joint 52 forms an angulated intersecting joint. The stone section 13' also simulates stones of irregular shape providing the advantage as heretofore described.

[00026] It is within the ambit of the present invention to cover any obvious modifications of the referred embodiment described herein, provided such modifications fall within the scope of the appended claims.